

### Abstract

A system and method for debugging a program which is intended to execute on a reconfigurable device. A computer system stores a program that specifies a function, and  
5 which is convertible into a hardware configuration program (HCP) and deployable onto a programmable hardware element comprised on the device. The HCP is generated based on the program, specifies a configuration for the programmable hardware element that implements the function, and further specifies usage of one or more fixed hardware resources by the programmable hardware element in performing the function. A test  
10 configuration is deployable on the programmable hardware element by a deployment program, where, after deployment, the programmable hardware element provides for communication between the fixed hardware resources and the program. The program is executable by a processor in the computer system, where during execution the program communicates with the one or more fixed hardware resources through the programmable  
15 hardware element.